MACGREGOR INSTRUMENT COMPANY

SURGICAL AND DENTAL
SPECIALTIES

TRADE VIM MARK REGISTERED

CABLE ADDRESS
"ROGERMAC" BOSTON.

NEEDHAM, MASS., U.S.A.

Dr. M. E. DeBakey, and
Dr. W. H. Gillentine,
Charity Hospital,
New Orleans, La.

Dec. 29, 1932

Gentlemen:

Your letter of December 19, together with your ingenious device for blood transfusion, was turned over to me yesterday, and I have just gone over the matter with very great care.

At the outset it is only fair to tell you that after going over our agreement with Dr. Scannell, an agreement entered into nine years ago, and which frankly we had more or less forgotten about, we feel we must tell you right at the outset that our arrangement with Dr. Scannell does not permit of us placing on the market any apparatus for blood transfusion other than that designed by him. We are therefore unable to avail ourselves of the very kind opportunity you are placing in our way.

Feeling that our suggestions and criticisms in the matter may be welcome and of interest to you, we are going to send them along, as we realize you have done a vast amount of work in the development of this apparatus, and your device is a most excellent one.

There are, of course, a great many accessories required to round out an apparatus for a transfusion of blood successfully, and it is of very great importance that all these steps be carried through to a successful conclusion.

For instance, the question of the rubber. This should, and in fact must be, a rubber that is free from sulphur, preferably a catheter is used, or any type of rubber that is moulded on glass rods. This insures a smooth lumen inside which is not the case if ordinary rubber tubing is used. Many many times during the period that we used ordinary rubber tubing we had trouble and reactions due to the roughness of the inside bore of the tube.

This is entirely eliminated first, by the use of a sulphur-free rubber, and secondly, a product that is moulded on a glass rod.

In the manufacture of the valve proper it is important that this job be placed in the hands of some one who realizes the very great importance of accurate work, and not only accurate work, but there should be definite instructions given to this manufacturer in regard to the complexity of human blood. All sharp edges must be avoided, the port holes and other openings must of course always align perfectly. In other words, every portion of this valve should be produced with precision, and this should be understood right at the very outset, as otherwise the ordinary manufacturer would look upon this as just a plain, ordinary, screw machine job, and would produce parts that might lead to disastrous results.

5 The valve pistons should be made out of a material with a low coefficient of expansion so that it will expand more slowly than the outer sleeve, and thus in a measure compensate for the expansion that comes with the rise in temperature caused by contact with the blood as it flows through. Monel metal is desirable in this respect

Based on our experience in selling a very large number of blood transfusion outfits, not only in this country but abroad, we feel that the first and probably the chief criticism that you will get on your device is the difficulty of holding it with sufficient rigidity. You will be told that the method of operation which makes it exceedingly difficult to hold the valve with steadiness during the pumping operation, will cause the needles to be disturbed, and even pulled out of position, unless they are securely locked in. And with all this in mind I wonder if it would not be advisable to redesign the outer sleeve so as to give a better grip or to develop a small clamp so any one wishing to attach it to a bedside table could readily do so.

To commercialize an idea of this kind we must always have in mind that certain criticisms are bound to come and the ideal thing is to break down the sales resistance as far as possible. Based on our own experience we feel sure that this feature of your device will be criticised.

Our own training in this line has of course been very largely colored by the ideas of Dr. Scannell and his associates, and naturally we are very strongly in favor of his technique. Scannell objects entirely to the rigid clamp. However the Scannell valve functions entirely differently from your own and it is perfectly possible to hold the Scannell outfit in such a way that no tension is ever placed upon the needles. Your own valve however functions quite differently and it is of vital importance that the valve body be held rigidly in

order that the piston of the syringe and the sleeve and valve piston function perfectly. Inasmuch as your device, if placed on the market, will ultimately pass into the hands of men who are anything but skillful it becomes imperative that the device be made as nearly as possible "fool proof."

You are of course familiar with the type of clamp used by Unger and the more I think of it the more I am inclined to the opinion that a clamp would be the safest thing to use in connection with your device.

You of course appreciate the fact that air tight joints are also of vital importance. We developed in connection with our apparatus what is known as a "VIM-Lock" and we would be very happy to supply you with these should you desire instead of the method that you use for fastening on the rubber tubing. After repeated boilings these rubber tubes are apt to become soft and spongy and as a result they are very apt to leak air and cause trouble, while with the VIM-Lock attachment this is entirely overcome.

We are hoping that these ideas may be of some interest to you and possibly helpful, and if after going over them we can be of any further service to you please do not hesitate to call on us.

Very cordially yours,

MacGREGOR INSTRUMENT COMPANY

JM/R

John MacGregor
President

P.S. The apparatus is being returned by registered mail this afternoon.